

Application No.: 10/063,559

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-18 (Canceled)

Claim 19 (Currently Amended) A method for providing information correlated to one or more probe sets on one or more biological probe arrays, wherein each probe-set is capable of the identification of a biological molecule comprising:

receiving a query comprising a user selection of one or more ~~of the probe-set~~ identifiers, wherein each ~~of the probe-set identifiers~~ probe-set identifier is a name assigned by a probe array manufacturer that specifies the identity of ~~identifies one or more of the probe sets~~ a probe-set selected from the results of one or more experiments performed using the one or more biological probe arrays;

correlating each ~~of the probe-set identifiers~~ probe-set identifier with ~~gene or EST data~~ a protein sequence;

correlating the ~~gene or EST data~~ protein sequence with a set of protein family data; and

providing the set of protein family data to the user.

Claims 20 – 48 (Canceled)

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Claim 49 (Currently Amended) A system for providing information correlated to one or more probe sets on one or more biological probe arrays, comprising:

an input manager for receiving a query comprising a user selection of one or more ~~of the probe-set identifiers~~, wherein each ~~of the probe-set identifiers~~ identifier is a name assigned by a probe array manufacturer that specifies the identity of ~~identifies one or more of the probe sets~~ a probe-set selected from the results of one or more experiments performed using the one or more biological probe arrays;

a determiner for correlating each ~~of the probe-set identifiers~~ identifier with gene ~~or EST data~~ a protein sequence;

a correlator for correlating the ~~gene or EST data~~ protein sequence with a set of protein family data; and

an output manager that provides the set of protein family data to the user.[::]

~~wherein the probe-set identifiers include one or more of accession number, manufacturer defined probe set identifier, biological sequence, or annotation term, and further wherein the gene or EST data includes biological sequence.~~

Claim 50 (Currently Amended) The system of claim 49, wherein:

the protein family data ~~includes~~ comprise biological process, molecular function, or cellular location information.

Claim 51 (Currently Amended) The system of claim 49[[50]], wherein:

the protein family data ~~comprises~~ comprise protein domain information.

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Claims 52 – 63 (Cancelled)

Claim 64 (Currently Amended) The method of claim 19, wherein:

the protein family data ~~comprises~~ comprise biological process, molecular function, or cellular location information.

Claim 65 (Currently Amended) The method of claim 19[[64]], wherein:

the protein family data ~~comprises~~ comprise protein domain information.

Claim 66 (Cancelled)

Claim 67 (New) The method of claim 19, wherein:

the protein family data include a consensus sequence that is aligned to the protein sequence and provided to the user.

Claim 68 (New) The method of claim 19, wherein:

correlating the protein sequence with a set of protein family data comprise a determination of sequence or structural similarity between the protein sequence and the set of protein family data.

Claim 69 (New) The method of claim 68, wherein:

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the determination of sequence or structural similarity comprises implementing a plurality of Hidden Markov Models each trained to a specific protein family associated with a set of protein family data.

Claim 70 (New) The method of claim 69, wherein:

the protein sequence is determined to be correlated with the set of protein family data when a value associated with the Hidden Markov Model for the protein sequence and the set of protein family data is above a threshold value.

Claim 71 (New) The method of claim 49, wherein:

the output manager provides a graphical user interface that includes the protein sequence aligned to a consensus sequence associated with the set of protein family data.

Claim 72 (New) A method for providing information correlated to one or more probe sets on one or more biological probe arrays, wherein each probe-set is capable of the identification of a biological molecule comprising:

receiving a query comprising a user selection of one or more probe-set identifiers, wherein each probe-set identifier is a name assigned by a manufacturer that specifies the identity of a probe-set selected from the results of one or more experiments performed using the one or more biological probe arrays;

correlating each probe-set identifier a set of protein family data; and

providing the set of protein family data to the user.